

Both the MID WAVE INFRARED CAMERA and the NEAR INFRARED CAMERA will be used during missile defense test events requiring the camera to be mounted to a tracking mount. An enclosure will protect the camera from the elements, however, the camera will be exposed to high humidity (95% relative), high temperature (105 F), and low temperature (20 F) for short durations (2 hours) during setup and alignment. In some cases the system will be shipboard and will experience typical topside shock and vibration.

System Performance Specs:

MID WAVE INFRARED CAMERA

Spectral Response: 3.0 – 5.5 micrometer

Detector Format: greater than or equal to 640 x 480 Focal Plane Array w/Windowing capability

Pixel Pitch: less than or equal to 25 micrometer

Digital Data Output: greater than or equal to 14 bit

Digital Data Rate: greater than or equal to 120 frames per second

Digital Data Output Format: Camera Link or RS422

Analog Data Output: NTSC RS-170

Form Factor: less than or equal to 20cm x 8cm x 8cm

Capability to locate cameras greater than or equal to 50 feet from the data collection system

Power: 108-120 V 60 Hz AC

The MID WAVE INFRARED Camera will be compared to the following minimum System Performance Specs. Deviations from these specs will be handled in the following manner (Noted next to each spec). Level of importance is noted next to each spec, zero (0) is for specs that will not factor into increased cost justification with 4 being the highest.

MID WAVE INFRARED CAMERA

(0) Spectral Response: 3.0 – 5.5 micrometer

(1) Detector Format: greater than or equal to 640 x 480 Focal Plane Array. Larger format will increase the field of view of the system providing the capability to collect data on objects which have greater spatial divergence which is of interest to typical sponsors, a larger Detector Format will be considered as a justification for increased cost.

(2) Pixel Pitch: less than or equal to 25 micrometer. Smaller pixels will produce higher resolution which may provide greater data collection capability of interest to typical sponsors, and will be considered in a justification for increased cost.

(0) Digital Data Output: greater than or equal to 14 bit

(4) Digital Data Rate: greater than or equal to 120 frames per second. Higher frame rates allow the system to collect higher temporal resolution data providing greater capability to image short duration events, and will be considered as a justification for increased cost.

(0) Digital Data Output Format: Camera Link or RS422

(0) Analog Data Output: NTSC RS-170

(3) Form Factor: less than or equal to 20cm x 8cm x 8cm Smaller form factors will more easily fit into the current system design and will be considered as a justification for increased cost

(0) Capability to locate cameras greater than or equal to 50 feet from the data collection system

(0) Power: 108-120 V 60 Hz AC

System Performance Specs:

NEAR INFRARED CAMERA

Spectral Response: 0.9 – 1.7 micrometer

Detector Format: greater than or equal to 640 x 480 Focal Plane Array w/Windowing capability

Pixel Pitch: less than or equal to 25 micrometer

Digital Data Output: greater than or equal to 14 bit

Digital Data Rate: greater than or equal to 60 frames per second

Digital Data Output Format: Camera Link or RS-422

Analog Data Output: NTSC RS-170

Form Factor: less than or equal to 20cm x 8cm x 8cm

Capability to locate cameras greater than or equal to 50 feet from the data collection system

Power: 108-120 V 60 Hz AC

The NEAR INFRARED Camera will be compared to the following minimum System Performance Specs. Deviations from these specs will be handled in the following manor (Noted next to each spec). Level of importance is noted next to each spec, zero (0) is for specs that will not factor into increased cost justification with 4 being the highest.

NEAR INFRARED CAMERA

(0) Spectral Response: 0.9 – 1.7 micrometer

(1) Detector Format: greater than or equal to 640 x 480 Focal Plane Array w/Windowing capability. Larger format will increase the field of view of the system providing the capability to collect data on objects which have greater spatial divergence which is of interest to typical sponsors, a larger Detector Format will be considered as a justification for increased cost.

(2) Pixel Pitch: less than or equal to 25 micrometer. Smaller pixels will produce higher resolution which may provide greater data collection capability of interest to typical sponsors, and will be considered in a justification for increased cost.

(0) Digital Data Output: greater than or equal to 14 bit

(4) Digital Data Rate: greater than or equal to 120 frames per second. Higher frame rates allow the system to collect higher temporal resolution data providing greater capability to image short duration events, and will be considered as a justification for increased cost.

(0) Digital Data Output Format: Camera Link or RS422

(0) Analog Data Output: NTSC RS-170

(3) Form Factor: less than or equal to 20cm x 8cm x 8cm Smaller form factors will more easily fit into the current system design and will be considered as a justification for increased cost

(0) Capability to locate cameras greater than or equal to 50 feet from the data collection system

(0) Power: 108-120 V 60 Hz AC